

NOAA GRTSP Award Recipients Profiles

NOAA Graduate Research and Training Scholarship Program has awarded eleven (11) scholarships to students since 2014 that are pursuing degrees in NOAA mission sciences at Educational Partnership Program with Minority Serving Institutions (EPP/MSI) Cooperative Science Centers (CSCs).

Profiles of recipients highlight their research, its relevance to NOAA, and the benefits gained by conducting internships at NOAA laboratories and offices under the guidance of their academic advisors and NOAA host mentors.

NOAA GRTSP scholarship recipients' profiles are featured here.

Class of 2014

[Marisa N. C. Litz](#)

Department of Fisheries and Wildlife, Oregon State University

[Daryl Sibble](#)

School of the Environment, Florida A&M University

[Andrea Gomez](#)

Earth and Environmental Sciences, City College of the City University of New York

Class of 2015

[Carlos D. Carrizo](#)

Electrical Engineering Department, City College of the City University of New York

[Chante D. Davis](#)

Department of Fisheries and Wildlife, Oregon State University

[Keren Rosado](#)

Department of Atmospheric Science, Howard University

Carlos D. Carrizo

Electrical Engineering Department, City College of the City University of New York

NOAA CSC: [Cooperative Remote Sensing Science and Technology Center](#)

Academic Advisor: Alexander Gilerson, City College of New York

NOAA Mentor(s): Michael Ondrusek, [NESDIS/STAR](#)

NOAA GRTSP Internship: Polarization effects at the top of atmosphere over ocean and coastal waters and their impact on satellite remote sensing considerations



Carlos Carrizo, 2015 GRTSP scholarship recipient

Profile

Carlos Carrizo was awarded the prestigious NOAA EPP/MSI Graduate Research and Training Scholarship Program (GRTSP) fellowship, in February, 2015. During the first two months of the program, Carlos collected, processed and analyzed data from previous field campaigns including both coastal and open-ocean waters and atmospheres. The comprehensive dataset being analyzed includes mostly in-situ measurements acquired on the Chesapeake Bay Field campaign (2013) which took place in collaboration with Mr. Michael Ondrusek and Dr. Maria Tzortziou; NASA SABOR field campaign (2014); and NOAA VIIRS CAL/VAL cruise (2014) with Mr. Ondrusek as the Chief Scientist. Carlos' work is designed to estimate the impact that typical ocean and coastal water constituents (i.e.: Chlorophyll, CDOM or Non-algal particles) have on Top Of Atmosphere (TOA) radiances, and to assess the sensitivity to polarization that satellite sensors may experience at the TOA. His initial results were presented at the 11th Annual NOAA/NESDIS CoRPS symposium at the University of Maryland.

As part of his training at NOAA, Carlos will participate in a new NOAA VIIRS CAL/VAL mission led by his NOAA mentor that will require participation and collaboration in activities such as pre-calibration and preparation of the equipment to be used during the field campaign, on-board operation and acquisition of data, as well as post-calibration, return of the equipment, and processing of acquired data. He is looking forward to working with Mr. Ondrusek, with whom he previously worked in the Chesapeake Bay Field campaign as well as others scientists on the next campaign. Carlos is certain that this internship experience at NCWCP will enrich his research while supporting NOAA's mission.

Marisa N. C. Litz

Department of Fisheries and Wildlife, Oregon State University

NOAA CSC: [Living Marine Resources Cooperative Science Center](#)

Academic Advisor: Jessica A. Miller, Oregon State University

NOAA Mentor(s): Richard D. Brodeur and Laurie A. Weitkamp, [NOAA Northwest Fisheries Science Center, Newport Field Station, Newport, OR](#)

NOAA GRTSP Internship: Development of a Bioenergetics Model to Evaluate the Effects of Prey Quality and Prey Availability on Juvenile Chinook Salmon Growth



Marisa Litz, 2014-2016 GRTSP scholarship recipient with her NOAA mentor, Dr. Richard Brodeur, a senior scientist at the NOAA National Marine Fisheries Service, Northwest Fisheries Science Center, Newport Field Station, Newport, Oregon.

Profile

Marisa Litz, a PhD student at Oregon State University, was selected for the Graduate Research and Training Scholarship Program (GRTSP) in 2014. Marisa's research incorporates field and laboratory studies to understand effects of the nearshore ocean environment on growth and survival of Pacific salmon. For her training opportunity, Marisa spent four months at the NOAA Northwest Fisheries Science Center, Newport Field Station in Oregon working alongside NOAA senior scientist Dr. Richard Brodeur and Dr. Laurie Weitkamp developing a bioenergetics model to simulate foraging during variable oceanographic conditions. As a GRTSP fellow, Marisa participated in a NOAA research cruise, and broadened her professional network while conducting science to support NOAA's long term goal of healthy oceans through improved understanding of ecosystems to inform resource management decisions. Marisa presented her work at the 7th Biennial NOAA-EPP/MSI Education and Science Forum in Princess Anne, Maryland in November 2014, at the 16th Salmon Ocean Ecology Meeting in Victoria, British Columbia in March 2015, and at the 145th Annual American Fisheries Society (AFS) Meeting in Portland, Oregon in August 2015. Marisa also teamed up with Atlantic salmon researchers from the NOAA Northeast Salmon Team to conduct a comparative study examining the effects of river discharge on feeding ecology in juvenile Pacific and Atlantic salmon, and the results of that collaborative effort were also presented at the AFS meeting. Marisa believes the GRTSP helped elevate the quality of her dissertation by providing an opportunity to develop and conduct research with input from scientists across federal and academic institutions.

Daryl Sibble

School of the Environment, Florida A&M University

NOAA Cooperative Science Center: [Environmental Cooperative Science Center](#)

Academic Advisor: Elijah Johnson, Florida A&M University

NOAA Advisor: LaToya Myles, [NOAA OAR Air Resources Laboratory, Atmospheric Turbulence and Diffusion Division, Oak Ridge, TN](#).

NOAA GRTSP Internship: Atmospheric Ammonia Deposition: Implications for Ecosystem Health and Function



Daryl Sibble, NOAA EPP/MSI 2014-2015 GRTSP scholarship recipient, presents a poster of his GRTS research at NOAA EPP's 7th Biennial Education and Science Forum with his NOAA mentor, Dr. LaToya Myles, Lead Research Physical Scientist at NOAA OAR ARL ATDD.

Profile

Daryl Sibble, a Ph.D. candidate at Florida A&M University (FAMU) was selected to be a part of the first cohort for the Graduate Research and Training Scholarship Program (GRTSP) in 2014. His research investigates atmospheric ammonia deposition processes in the Midwestern United States and how these processes affect the functionality and health of the surrounding ecosystem. From September 2013 to July 2014, Daryl spent his training opportunity working alongside fellow FAMU Ph.D. candidate Jason Caldwell under the supervision of Dr. LaToya Myles. The training opportunity was hosted by the Atmospheric Turbulence and Diffusion Division Laboratory in Oak Ridge, TN, which is one of several field divisions of NOAA's Office of Oceanic and Atmospheric Research, Air Resources Laboratory. Daryl worked collaboratively with students and faculty from Agro Paris Tech (France) and the University of Illinois at Urbana-Champaign to measure and model reactive nitrogen fluxes at the University of Illinois Sustainable Student Farm <http://nitrogen.cce.illinois.edu/index.html>

Through this research, Daryl contributed towards NOAA's Science and Technology Enterprise Objectives of understanding of the Earth system through research, acquiring accurate and reliable data from sustained and integrated earth observing systems, and utilizing an integrated environmental modeling system. Daryl's research

also supports NOAA's Engagement Enterprise Objective by demonstrating full and effective use of international partnerships and policy leadership to progress towards NOAA's long term goals for healthy oceans, and resilient coastal communities and economies. Daryl presented his work at the 7th Biennial NOAA-EPP/MSI Education and Science Forum in Princess Anne, MD in October 2014, at the American Geophysical Union Fall meeting in San Francisco, CA in December 2014, at the NOAA Environmental Cooperative Science Center Annual Meeting in Orlando, FL, in March 2015, and at several web broadcasted seminars at FAMU. He also participated in the 5th Annual NOAA/NGI Gulf Hypoxia Research Coordination Workshop in Slidell, LA in July 2014 to discuss how atmospheric ammonia deposition contributes to red tide and hypoxia in the Gulf of Mexico. Daryl published a portion of his GRTSP research in the December 2013 edition of the Southern Climate Monitor, and coauthored a peer reviewed article that was published by the Journal of the Air & Waste Management Association in January 2015. Several other publications are pending from the research that was conducted during the GRTSP funding period. Daryl believes that the GRTSP has given him a unique opportunity to collaborate with a wide variety of professional and student scientists. It helped to support the logistics involved in dissertation data collection and analysis. He is most grateful for the invaluable experience that was gained while working at a NOAA facility and the ongoing tutelage provided by his NOAA mentor, Dr. LaToya Myles.

Daryl is currently interning with the Gulf Islands National Seashore (GINS). He serves as the lead coordinator for a GINS citizen science project entitled "Turtle Teens Helping in the Seashore" (Turtle T.H.i.S.), a collaborative effort with GINS park rangers, Conservation Legacy's Environmental Stewards, U.S. Geological Survey, National Park Service Night Skies Program, and the National Park Foundation. Turtle T.H.i.S. is designed to cultivate environmental stewardship and awareness among the local citizens groups. The program also serves as a recruiting and mentoring platform for student participants interested in pursuing a STEM career. Daryl has been mentoring STEM students since he became an academic coach for NOAA's ECSC's High School Science Bowl team (a position he maintained during his internship in Oak Ridge). Daryl's passion for mentoring STEM students was instilled by Dr. LaToya Myles, a former NOAA EPP/MSI Graduate Sciences trainee and alumna of FAMU. Both LaToya and Daryl realize the importance of reaching back into the academic pipeline to guide aspiring STEM students. Mentoring and outreach is essential for increasing the graduation rates in the STEM majors, and producing highly qualified workforce of scientists to carry on NOAA's goals and objectives for generations.

Andrea Gomez

Earth and Environmental Sciences, City College of the City University of New York

NOAA Cooperative Science Center: [Cooperative Remote Sensing Science and Technology Center](#)

Academic Advisor: Kyle McDonald, City College of the City University of New York

NOAA Mentor: Mark Eakin, [NOAA NESDIS STAR](#)

NOAA GRTSP Internship: The Relationship Between Temperature-induced Stress and Fluorescence and Reflectance Hyperspectral Signatures of Corals.



Andrea Gomez at her internship site, the NOAA Center for Weather and Climate Prediction

Profile

Since receiving the NOAA GRTSP Scholarship in August 2014, Andrea has successfully defended her Master's in Biology Department in the City College of the City University of New York (CUNY) and has entered the Ph.D. Program in Earth and Environmental Sciences at the CUNY Graduate Center. Andrea said, the fellowship gave her the opportunity to attend the Workshop on "Applications of Seasonal to Decadal Climate Predictions for Marine Resource Management" held at Princeton University in 2015, where she presented the results of her Master's research entitled "Effects of Heat Temperature Stress on Coral Fluorescence and Reflectance." One of the highlights of this fellowship was the 3-month internship at a NOAA facility. During her stay in NOAA/NESDIS/NCWCP facility in College Park, MD in summer 2015, she had the honor to work with NOAA's Coral Reef Watch Team, which utilizes sea surface temperature satellite data to predict coral bleaching events. Dr. Mark Eakin served as her NOAA advisor, and this internship provided a great networking opportunity within the coral reef community. During this internship, she learned how Coral Reef Watch was operated, and helped to prepare for the mass data collection for the predicted third global bleaching event, which was officially announced on October 8th, 2015. Andrea also attended and participated in the 2015 NOAA CoRP Student Science Symposium at the University of Maryland where she had the opportunity to engage with other students, faculty and other NOAA researchers. For her Ph.D. research, Andrea plans to continue studying coral's fluorescence and reflectance signatures, and how they can be used to assess coral health utilizing remote sensing.

Chante D. Davis

Department of Fisheries and Wildlife, Oregon State University

NOAA Cooperative Science Center: [Living Marine Resources Cooperative Science Center](#)

Academic Advisor: Michael A. Banks, Oregon State University

NOAA Mentor: Eric Anderson, <https://swfsc.noaa.gov/>

NOAA GRTSP Internship: Development of a Riverscape Genetics Model to Evaluate the Effects of Environmental Parameters on Genetic Structure of Chinook Salmon



Chante Davis with NOAA mentor Eric Anderson at the NOAA SWFSC in Santa Cruz CA

Profile

Chante Davis is a Ph.D. candidate at Oregon State University and 2015 recipients of the Graduate Research and Training Scholarship Program (GRTSP). As a research scholar, Chante will spend 4 months working with NOAA scientists of the Fisheries Ecology Division at the Southwest Fisheries Science Center in Santa Cruz, CA. In early September Chante moved to the SWFSC to train with Eric Anderson and the Molecular Ecology Team. Chante has identified evidence for fine scale population sub-structuring in a relatively short coastal river and will work with her NOAA mentor to determine how associated Chinook salmon life histories are distributed across the landscape. Typically, in population genetics, the relationship between spatial structure and genetic difference is assessed by testing for isolation-by-distance. This method uses Euclidian distance, a straight-line relationship between points, which is not reflective of the path aquatic organisms use. For many aquatic organisms there is only one path through the landscape and this should be accounted for when running analysis; existing software packages do this type of analysis poorly or not at all. Over the remaining months of her internship Chante and Eric will develop a model more appropriate for organisms living in a watershed. Chante believes that the GRTSP experience is transforming her programming skills and expanding her knowledge of next generation sequencing. These tools will enhance the quality of her dissertation and contribute to her growth as a molecular ecologist.

Keren Rosado

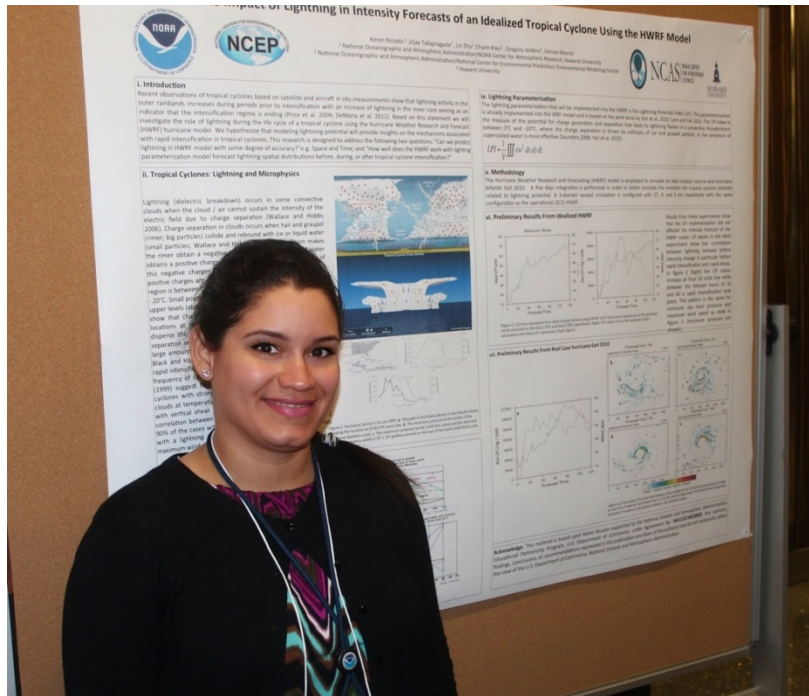
Department of Atmospheric Science, Howard University

NOAA Cooperative Science Center: [NOAA Center for Atmospheric Sciences](#)

Academic Advisor: Gregory Jenkins, Howard University

NOAA Mentor: Vijay Tallapragada, [Environmental Modeling Center](#)

NOAA GRTSP Internship: Determine the Relationship of Lightning with Intensity Forecasts of Tropical Cyclone Using the HWRF Model



Keren Rosado presenting her poster showing preliminary results at NOAA NCEP.

Profile

Keren Rosado is a Ph.D. candidate at Howard University and Graduate Research and Training Scholarship Program (GRTSP) fellow since 2015. Keren's research is designed to address the following leading question "How well does the Hurricane Weather Research and Forecast (HWRF) computer model with lightning parameterization model forecast lightning spatial distributions work before, during, or after tropical cyclone intensification?" Her research has been conducted at the NOAA facility National Center for Weather and Climate Prediction (NCWCP) College Park, Maryland. Keren is fortunate to live and attend school in close proximity to the NCEP facility which has enabled her to go to the facility every day. Some of Keren's accomplishments as a GRTSP fellow to date are: Implementation of the Lightning Potential Index (LPI) into the Hurricane Weather Research and Forecast operational computer model (HWRF); Validation of the LPI implementation using an Ideal Tropical Cyclone simulation; Application of the LPI diagnostic tool into real cases of Tropical Cyclones (Atlantic hurricane Earl 2010). The results of her preliminary research will be presented at The 32nd Conference on Hurricanes and Tropical Meteorology to be held April 17-22, 2016 which will be held in San Juan, Puerto Rico. Keren attributes the key to her progress and successes are due largely to the collaborative research with her NOAA mentor, and having the privilege of conducting her research at NOAA/NCEP. Based on her experience thus far, Keren can without hesitation state how beneficial and important the communication between mentor, mentee and scientific collaboration is in completing her research. Keren looks forward to continuing to expand her perspectives and scientific capacity thanks to her academic advisor and NOAA mentor and the many other collaborators from the NOAA HWRF research group.